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EXAMINER

LIN, WEN TAI

ART UNIT

PAPER NUMBER

2154

DATE MAILED: 03/30/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/051,441

Applicant(s)

AMIRISETTY ET AL.

Examiner

Wen-Tai Lin

Art Unit

2154

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 27 December 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-88 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-88 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. Claims 1-88 are presented for examination.
2. Following the SPRE's decision made on Applicant's petition under 37 CFR 1.144, filed on November 26, 2005, the previous restriction is withdrawn. Consequently, claims 36-50 and 62-72 are rejoined to the examined claims and the instant office action is made non-final.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

3. Claim 7, 14, 20, 30, 42, 48, 59, 71, 76 and 83 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.
4. As to claims 7, 20, 42 and 76, it is unclear what is meant by "discover the one or more high-level functions" by accessing information stored in a metadata repository? Since Applicant's specification provides no specific definition, it is construed that the discovering process is equivalent to the nominal indexing, searching, or keying over a metadata array of file.

5. As to claims 14, 30, 48, 59, 71 and 83, it is unclear what constitutes the so called “J2EE Connector Architecture”? That is, in accordance the J2EE CA Specification (see item A2 of the IDS filed on 7/1/05), there are many different levels of description detailing the so called J2EE CA, it is not clear what features are included in these claims. More specifically, paragraph 6 of Applicant’s Specification states that “J2EE CA specifies a required contract **between** the connector and the container for managing resource pooling, transactions and security. J2EE CA also specifies a Common Client Interface (CCI) for client interaction with the connector, which the connector **may choose** to implement”. Based on the first statement it appears that the connector is outside the container, however, Figures 1-3 all show that the connector is inside the container. Furthermore, based on the second statement, it appears that CCI is an option to the architecture because the connector “may choose” to implement, which would render the claims indefinite if the above paragraph is read into these claims. For prior art rejection the “J2EE CA” connector is construed as a generic connector for connecting between a Java based platform to any enterprise system. Clarification is required in response to this office action.

Claim Rejections - 35 USC § 102

6. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this

subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

7. Claims 1-2, 9-19, 24, 26-38, 43, 45 and 48-50 are rejected under 35 U.S.C. 102(e) as being anticipated by Sheriff et al. [U.S. Pat. No.6854122].

8. As to claims 1 and 13, Sheriff teaches the invention as claimed including: a method comprising:

an application sending to a container a data object specifying a high-level function [e.g., CIM operations] provided by a system external to the application [col.1, lines 61-64];

the container receiving the data object specifying the high-level function [e.g., 13-17, Fig.1; col.3, lines 25-28];

the container accessing metadata corresponding to the high-level function, wherein the metadata describes the high-level function of the external system [e.g., col.3, line 50 – col.7, line10];

the container performing one or more transformations on the data object specifying the high-level function in accordance with the metadata to produce a data object including information for driving a connector to the external system to make a plurality of low-level calls [e.g., APIs or the routines translated into bytecode] to the external system to perform the high-level function [col.3, lines 25-38 and 45-49; col.7, lines 12-34];

the container executing the data object including the information for driving the connector to the external system to drive the connector to make the plurality of low-level calls to the external system [e.g., 17, Fig.1; col.3, lines 39-41] ; and

the external system executing a plurality of low-level functions as specified by the plurality of low-level calls received from the connector, wherein said executing the plurality of low-level functions performs the high-level function of the external system [e.g., 18-24, Fig.1] [Note that by treating each of the functions listed at col.3, lines 50-61 as low-level functions, it is clear that a high level function may be specified to include at least open() and close() because these are commonly needed routines in a high-level application. On the other hand, when treating the functions listed at col.3, lines 50-61 as high-level functions, then each (Java) routine is converted into a set of low-level instructions written in terms of byte code causing the external system to execute the corresponding low-level functions].

9. As to claim 2, Sheriff further teaches that the method comprise:

the container receiving results of said executing the plurality of low-level functions;
the container storing the results of said executing the plurality of low-level functions in a results data object;

the container performing one or more transformations on the results data object to generate an output data object, wherein the output data object includes the results of the high-level function; and the container providing the output data object to the application [e.g., Fig.1; col.2, lines 32-44].

10. As to claim 9, Sheriff further teaches that the application accesses the container in accordance with an Application Programming Interface (API) to the container [Abstract].

11. As to claim 10, Sheriff further teaches that the plurality of low-level function calls to the external system are specific to the connector, wherein said mapping the high-level function call to a plurality of low-level function calls to the external system comprises the container accessing metadata corresponding to the high-level function call, wherein the metadata maps the high-level function call to the plurality of low-level function calls to the external system specific to the connector [Figs. 1-3; e.g., the connector is a CIM/WIM mapper, which is specific for mapping between Java based routines and window based management data].

12. As to claim 11, Sheriff further teaches modifying the metadata corresponding to the high-level function to map the high-level function call to a plurality of low-level function calls to the external system specific to a different connector to the external system [e.g., 17, Fig.1 is different from 308 of Fig.3, which can be obtained by simply modifying the metadata contained in the mapper].

13. As to claims 12 and 15, Sheriff does not specifically teach that the application is comprised in the container because Sheriff's examples are focused on network environments. However, it is obvious that Sheriff's application may also be applicable to applications that are local to the container server because Sheriff's mapping method depends only on the type of operating platforms [col.3, lines 17-24].

14. As to claim 14, Sheriff further teaches that the connector is a Java 2 Enterprise Edition Connector Architecture (J2EE CA) connector [e.g. Fig.3, wherein the connector is a mapper for

driving Java based CIM routines to a Web based enterprise Management].

15. As to claim 16, Sheriff further teaches that the container is a Java Virtual Machine (JVM) [102, Fig.2].

16. As to claim 17, Sheriff further teaches that the external system is an Enterprise Information System [e.g., Fig.3, wherein WBEM is a Microsoft's web based enterprise management].

17. As to claims 18-19, 24, 26-38, 43, 45 and 48-50, since the features of these claims can also be found in claims 1-2 and 9-17, they are rejected for the same reasons set forth in the rejection of claims 1-2 and 9-17 above.

Claim Rejections - 35 USC § 103

18. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

19. Claims 3-8, 20-23, 25, 39-42, 44, 46-47 and 51-88 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sheriff et al.(hereafter "Sheriff")[U.S. Pat. No.6854122], as applied to claims 1-2, 9-19, 24, 26-38, 43, 45 and 48-50 above.

20. As to claims 3-5, Sheriff is silent about how the metadata is stored. However, in order to use each of the supported methods listed at col.3, line 64 – col.6, line 29, it is obvious that the metadata should be stored somewhere in a memory space, which can be in a persistent store or a repository for further references.

Further, Sheriff is silent about the situation when the application is moved from unmanaged environment to managed environment. However, according to the example of Figs. 1 and 3, the management application is sent from a remote java console [11, Fig.1] external to the container storing the metadata. As such, it is clear that there is no need to repopulate the metadata repository because the container is independent of the application's platform.

21. As to claim 6, Sheriff teaches using Java Native Interface (JNI) to make Java code portable across various platforms [col.7, lines 11-18]. Based on the example of Java-C code translation [Fig.2], it is an obvious option to also implement the metadata repository in a Java Naming and Directory Interface (JNDI) namespace because the latter is needed for implementing the Java virtual machine.

22. As to claims 7-8, Sheriff does not specifically teach how each of the high-level functions of the external system is “discovered” in the metadata repository and how each function’s associated parameters are retrieved from the repository.

However, since each of the supported CIM methods (e.g., col.3, lines 51-62) has a corresponding name in the CIM/WMI mapper with the original CIM name embedded in it (e.g., col.6, line 46 – col.7, line 10), it is obvious to one of ordinary skill in the art that the CIM methods of the external system (i.e., the CIM methods) can be found from the list of names (which constitute part of the metadata) in the mapper by using hashing technique because hashing is a popular technique for effectively organizing string arrays. Likewise, the parameters of each function can be hashed into the array, which is keyed by using its CIM name, so as to bind the CIM names with its associated parameters necessary to make a CIM/WIM function call.

23. As to claims 20-23, 25, 39-42, 44, 46-47 and 51-88, since the features of these claims can also be found in claims 1-19, 24, 26-38 and 48-50, they are rejected for the same reasons set forth in the rejection of claims 1-19, 24, 26-38 and 48-50 above.

24. A shortened statutory period for response to this action is set to expire 3 (three) months and 0 days from the mail date of this letter. Failure to respond within the period for response will result in ABANDONMENT of the application (see 35 U.S.C. 133, M.P.E.P. 710.02, 710.02(b)).

Conclusion

Examiner note: Examiner has cited particular columns and line numbers in the references as applied to the claims above for the convenience of the applicant. Although the specified citations are representative of the teachings of the art and are applied to the specific limitations within the individual claim, other passages and figures may apply as well. It is respectfully requested from the applicant in preparing responses, to fully consider the references in entirety as potentially teaching all or part of the claimed invention, as well as the contest of the passage as taught by the prior art or disclosed by the Examiner.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Wen-Tai Lin whose telephone number is (571)272-3969. The examiner can normally be reached on Monday-Friday (8:00-5:00) .

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, John Follansbee can be reached on (571)272-3964. The fax phone numbers for the organization where this application or proceeding is assigned are as follows:

(571) 273-8300 for official communications; and

(571) 273-3969 for status inquires draft communication.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Wen-Tai Lin

March 27, 2006

Wen-Tai Lin
3/27/06